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2016 Pumpkin Cultivar Evaluations in West Virginia

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Pumpkins (*Cucurbita sp.* L.) are a very popular fall ornamental crop in West Virginia. Each year, new commercial cultivars are released and growers must choose the appropriate cultivars for their respective markets. In 2016, we evaluated Jack-o-lantern pumpkins for adaptability to West Virginia.

Materials and Methods

Twenty-eight pumpkin cultivars were evaluated at the WVU Kearneysville Research Farm in the Eastern Panhandle of West Virginia (Figure 1).

The soil had a base pH of 7.2. Prior to planting 80 lbs. of N, P₂O₅ and K₂O were applied to the test plot area (≈0.7 acres). The pumpkin cultivars were seeded into 50-cell transplant trays and grown as transplants for 3 weeks before being hand-planted on June 28, 2016. We used biodegradable black plastic mulch for weed control. In addition, one cultivation was performed between beds to control weeds before vine closure. Each plot was 25 feet long with 7 feet between rows and 3 feet between plants resulting in approximately 2000 plants/acre. This was a relatively compact spacing, but given the soil quality, it was determined that this would be an average spacing for all cultivars. Standard pest management practices were employed including powdery mildew prevention. The experimental design was a randomized complete block design with 4 replications per cultivar. Marketable fruit were harvested on October 4-14, 2016 and sorted into marketable and nonmarketable before weighing and measuring quality variables such as color and ribbing.

Results and Discussion



Figure 1. Twenty-eight pumpkin cultivars were evaluated at the West Virginia University Kearneysville Farm in 2016.

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Table 1. Total marketable yield and fruit per acre for selected pumpkin cultivars in West Virginia- 2016.

Cultivar	Mkt (%)	Marketable pumpkins/acre (No.)	Avg. Wt. (lbs.)	Wt./acre (tons)
Ares	87.5	2963	17.9	4.3
Bayhorse Gold	92.4	2889	14.8	3.6
Bellatrix	96.0	3778	16.3	4.0
Camaro	85.8	3629	17.8	4.3
Capt. Jack	86.7	844	21.6	5.2
Cargo	100.0	3778	12.2	3.0
Challenger	100.0	2222	18.1	4.4
Champion	97.3	2667	20.0	4.8
Cronus	95.0	1259	18.8	4.5
Eagle City Gold	97.7	3185	12.3	3.0
Earlipak	55.0	815	15.4	2.8
Early King	96.8	2296	20.7	5.0
El Capitan	96.7	2222	13.7	3.3
El Toro	93.1	2148	17.4	4.2
Gladiator	86.5	2740	13.3	3.2
Gold Challenger	100.0	2741	15.7	3.8
Hannibal	98.2	4074	15.9	3.9
Honky Tonk	100.0	4578	12.4	3.0
Hulk	97.9	3481	22.0	5.3
Kratos	100.0	2296	16.7	4.1
Magic Lantern	98.1	3926	14.0	3.4
Magic Wand	100.0	3654	13.1	3.2
Mrs. Wrinkles	98.0	3556	14.6	3.5
Orange Rave	98.1	3778	12.2	3.0
Rhea	100.0	2222	15.2	3.7
Solid Gold	92.0	1852	16.6	4.1
Spartan	97.3	2741	17.2	4.2
Zeus	96.8	2296	13.0	3.2
<i>Significance_(0.05):</i>		<i>137.6</i>	<i>0.3</i>	<i>0.2</i>

Average weight ranged from 12-22lbs (Table 1). The spacing used in this study probably reduced average fruit weight, however all of the varieties were equally spaced and relative differences in weight should be consistent across all of the varieties

evaluated. Within the range of 12-15lbs., cultivars such as ‘Orange Rave’, ‘Honky Tonk’, ‘Mrs. Wrinkles’, and Magic Wand’ had significantly greater yields/acre. These cultivars had a dark orange color with excellent ribbing on the fruit which made the pumpkins particularly attractive to customers based on informal test marketing at the WVU Student Farm (Table 2).

For fruit weight >15lbs., ‘Ares’ ‘Bellatrix’, ‘Camaro’ ‘Hulk’ ‘Hannibal’, ‘Bayhorse Gold’ and ‘Spartan’ were excellent varieties with dark orange color and excellent fruit quality. ‘Ares’ and ‘Hulk’ were excellent tall pumpkins with good color and stem quality.

Table 2. Color and quality ratings of pumpkin cultivars evaluated in West Virginia,

Cultivar	Days to harvest ^z	Color ^y	Ribbing ^x	Comments
Cargo	100	DO	4.7	Intermediate resistance to PM ^w
Capt. Jack	105	MO	3.9	22-30 lbs. avg.; large handle
Early King	90	MO	3.2	21-26 lbs.; tall pumpkin with dark orange color
Eagle City Gold	100	MO	3.5	Medium-high yields
Gold Challenger	105	MO	4.0	Medium orange; good ribbing
Solid Gold	100	DO	3.6	17-22 lbs.
Hulk	100	DO	4.3	Large; tall pumpkin; 20-25 lbs.
Camaro	110	LO	2.3	Light orange with excellent PM ^w tolerance
Magic Lantern	100	DO	4.5	Excellent uniformity with PM tolerance
Mrs. Wrinkles	100	DO	5.0	Dark orange with deep ribbing
Challenger	110	MO	4.3	18-20 lbs.; good color and PM tolerance
Champion	115	DO	4.4	20 lbs.; poor handle quality
Gladiator	115	DO	4.4	Excellent PM tolerance with good color
Ares	115	DO	3.9	Excellent tall pumpkin with good color
Earlipak	100	MO	3.3	Poor yields
Hannibal	105	DO	4.5	16-20 lbs.; very uniform; good ribbing
Honky Tonk	100	DO	4.6	Very good yields 10-12 lb. fruit; dark orange
Bellatrix	95	DO	4.2	Excellent yields 16-18 lbs.
Cronus	100	DO	4.9	Large pumpkin with good ribbing and dark color
El Toro	110	MO	3.7	17-25 lbs. pumpkin; medium orange
Bayhorse Gold	100	DO	4.2	15-16 lbs. pumpkin weight; good yields
Orange Rave	100	DO	3.7	Excellent color, yield and uniformity
Kratos	100	DO	4.1	Medium orange; thick handles
Rhea	100	DO	4.2	Dark orange pumpkin with good ribbing
Spartan	100	DO	4.7	17-20 lb. fruit; dark orange
Magic Wand	115	DO	4.5	12-15lb. pumpkins ; dark orange with good ribbing
El Capitan	100	MO	3.6	15-20 lb. fruit; medium orange
Zeus	110	DO	3.5	15-20 lb. fruit; dark orange
Significance (0.05)			0.1	

^zDays from seeding

^yDO=Dark Orange; MO=Medium Orange; LO=Light Orange

^x Ribbing: 1-5; 1=poor/no ribbing; 5=excellent ribbing

^wPM=Powdery mildew

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